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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,222	07/24/2000	Yoshihito Asao	Q60045	5225

7590 03/01/2002
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EXAMINER

NGUYEN, TRAN N

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 03/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/624,222

Applicant(s)

ASAO ET AL.

Examiner

Tran N Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 October 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on 18 January 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Restriction/Election

Applicant elected claim 1 without traverse, filed on 10/12/01, is acknowledged. The *restriction* is hereby made final.

Double Patenting

The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. **Claim 1** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of the U.S. pending patent-application 09/978548 (hereafter, US-PPA '548) in view of Kato et al (DE 199 22 794 A1).

US-PPA'548 claimed an alternator substantially as the present claimed invention. While the US-PPA'548 claimed that the wire portions in which long strands of wire so as to alternately occupy an inner layer and an outer layer in a slot depth, the US-PPA'548 differs from the claimed invention in only one respect that is the claimed invention's stator winding portions are arranged in a pair of long strands of wire are wound such that each of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth.

Kato, however, teaches a stator winding having winding portions are arranged in a pair of long strands of wire are wound such that each of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth (figs 3-8).

Thus, , it would have been obvious to one skilled in the art at the time the invention was made to modify US-PPA '548 by arranging the stator winding portions into pairs wherein each wire of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth, as taught by Kato. Doing so would improve the spacing factor of the winding and prevent any short-circuit potential problem.

2. **Claim 1** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of the U.S. pending-patent-application 09/734680 (hereafter, US-PPA '680) in view of Kato et al (DE 199 22 794 A1) and Adachi (JP 09103052A) and Tamaka et al (US 4876473).

US-PPA'680 claimed an alternator substantially as the present claimed invention. The US-PPA'680 differs from the claimed invention in only three respects:

US-PPA'680 claimed an alternator substantially as the present claimed invention. The US-PPA'680 differs from the claimed invention in only two respects:

(a) the abutting portion making the stator core into an annular shape by abutting end portions of the stator core; and,

(b) that is the claimed invention's recites the stator winding portions are arranged in a pair of long strands of wire are wound such that each of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth.

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Regarding subsection (a), Adachi, however, teaches an alternator having a stator core with an abutting portion (51b) extending axially for forming the stator core into an annular shape (fig 1-3). Adachi teaches that this configuration of the stator core would facilitate the winding and prevent damage to the conductors of the winding. Furthermore, the Examiner takes Official Notice that magnetic core comprises with axially elongated segment(s) that circumferentially being combined into an annular magnetic core is well known in the art. See cited references for support of this statement.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the alternator by configuring the stator core with an abutting portion extending axially for forming the stator core into an annular shape, as taught by Adachi. Doing so would facilitate the winding and prevent damage to the conductors of the winding.

Regarding subsection (b), Kato, however, teaches a stator winding having winding portions are arranged in a pair of long strands of wire are wound such that each of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth (figs 3-8).

Thus, , it would have been obvious to one skilled in the art at the time the invention was made to modify US-PPA '680 by arranging the stator winding portions into pairs wherein each wire of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth, as taught by Kato. Doing so would improve the spacing factor of the winding and prevent any short-circuit potential problem.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kusase (US 6147432) in view of Adachi (JP 09103052A) Kato et al (DE 199 22 794 A1).

Kusase discloses an alternator substantially as the claimed alternator. Kusase particularly discloses a stator with slots. Each of the stator slot having plural conductor segments arranged in inner layer and outer layer, wherein the winding folding back outside the slots at axial end surfaces of the stator core (figs. 1-4). Kusase discloses windings are formed by conductor segments arranged in layers, but Kusase is silent about the structure of each conductor segments, i.e., the conductor segments are solid electrical conducting bars or stranded wires formed into individual conductor segments. Thus, Kusase *differs* for the claimed invention in the following two respects:

(a) the stator core being provided with an abutting portion extending axially for forming the stator core into an annular shape;

(b) the stator winding portions are arranged in a pair of long strands of wire are wound such that each of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth.

Regarding respect (a), Adachi, however, teaches an alternator having a stator core with an abutting portion (51b) extending axially for forming the stator core into an annular shape (fig 1-3). Adachi teaches that this configuration of the stator core would facilitate the winding and

prevent damage to the conductors of the winding. Furthermore, the Examiner takes Official Notice that magnetic core comprises with axially elongated segment(s) that circumferentially being combined into an annular magnetic core is well known in the art. See cited references for support of this statement.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify Kusase's alternator by configuring the stator core with an abutting portion extending axially for forming the stator core into an annular shape, as taught by Adachi. Doing so would facilitate the winding and prevent damage to the conductors of the winding.

Regarding respect (b), Kato, however, teaches a stator winding having winding portions are arranged in a pair of long strands of wire are wound such that each of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth (figs 3-8).

Thus, , it would have been obvious to one skilled in the art at the time the invention was made to modify US-PPA '548 by arranging the stator winding portions into pairs wherein each wire of the pair intercrosses each other to alternately occupy an inner layer an outer layer in a slot depth, as taught by Kato. Doing so would improve the spacing factor of the winding and prevent any short-circuit potential problem.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify Kusase's alternator by configuring the stator's conductor segments as long strands of wire are wound and arranged alternately in an inner layer and outer layer within the stator slots, as taught by Kusase. Doing so would reduce eddy current and generated heat therein.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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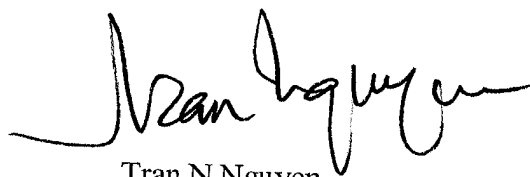
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.



Tran N Nguyen

Primary Examiner

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February 25, 2002